

What is claimed is:

1 1. A voice-over-Internet protocol (VoIP) device,
2 comprising:
3 a subscriber line interface circuit serving as an
4 interface for communications with a telephone;
5 a relay selectively coupled to a public switched
6 telephone network (PSTN) or coupled to a VoIP network
7 through the subscriber line interface circuit;
8 a processor coupled to the subscriber line interface
9 circuit to determine whether a transmission from the
10 telephone through the subscriber line interface circuit
11 is a PSTN phone number or a VoIP phone number, wherein
12 when the transmission is a VoIP phone number, the
13 processor routes the transmission to the VoIP network,
14 and when the transmission is a PSTN phone number, the
15 processor instructs the subscriber line interface circuit
16 to generate a dual-tone multi-frequency redial number;
17 and
18 a dual-tone multi-frequency coupling circuit coupled
19 between the subscriber line interface circuit and the
20 public switched telephone network for receiving the dual-
21 tone multi-frequency redial number from the subscriber
22 line interface circuit when the transmission is
23 determined as a PSTN phone number, and routing the dual-
24 tone multi-frequency redial number to the public switched
25 telephone network.

1 2. The voice-over-Internet protocol device of
2 claim 1, wherein the dual-tone multi-frequency coupling
3 circuit comprises:

4 a switching element having a first terminal and a
5 second terminal and controlled by the processor, wherein
6 the switching element is turned on by the processor when
7 the transmission is determined as a PSTN phone number;

8 a first coupling device coupled between the
9 subscriber line interface circuit and the first terminal
10 of the switching element for receiving the dual-tone
11 multi-frequency redial number from the subscriber line
12 interface circuit; and

13 a second coupling device coupled between the second
14 terminal of the switching element and the public switched
15 telephone network for routing the dual-tone multi-
16 frequency redial number to the public switched telephone
17 network when the switching element is turned on.

1 3. The voice-over-Internet protocol device of
2 claim 2, wherein the first coupling device is a
3 capacitor.

1 4. The voice-over-Internet protocol device of
2 claim 2, wherein the second coupling device is a
3 transformer.

1 5. The voice-over-Internet protocol device of
2 claim 2, wherein the switching element is a transistor.

1 6. The voice-over-Internet protocol device of
2 claim 1, further comprising a data access arrangement for
3 detecting the status of the public switched telephone

Client's ref. : PAMBIT-CO-0048/03-06-13
Our ref: 0636-8148usf/Ellen/Kevin

4 network and instructing the relay to allow the dual-tone
5 multi-frequency coupling circuit to transmit the dual-
6 tone multi-frequency redial number to the public switched
7 telephone network when the public switched telephone
8 network is not busy.